DOCUMENT RESUME

ED 370 320 EC 303 052

AUTHOR	Kranz, Bella
TITLE	Identifying Talents among Multicultural Children. Fastback 364.
INSTITUTION	Phi Delta Kappa Educational Foundation, Bloomington, Ind.
REPORT NO	ISBN-0-87367-364-6
PUB DATE	94
NOTE	33p.; This fastback is sponsored by the McIntosh Trail Georgia Chapter of Phi Delta Kappa.
AVAILABLE FROM	Phi Delta Kappa, 408 N. Union, P.O. Box 789, Bloomington, IN 47402-0789 ($1.25; Phi Delta Kappa members $1).
PUB TYPE	Information Analyses (070) -- Reports - Descriptive (141)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Cultural Differences; Cultural Pluralism; Elementary Secondary Education; Evaluation Methods; *Intelligence; Minority Groups; *Models; Student Evaluation; *Talent Development; *Talent Identification; Teaching Models
IDENTIFIERS	*Kranz Talent Identification Instrument; *Multiple Intelligences; Triarchic Theory of Intelligence (Sternberg)

ABSTRACT

This pamphlet examines the limitations of traditional identification strategies as they are applied to children from minority and nontraditional cultural backgrounds, and then suggests more effective alternatives. Conventional group tests are criticized for not providing a sufficient basis for addressing students' needs with regard to enrichment. Tests that measure qualities of divergent thinking and creativity are viewed as important in expanding the concept of intelligence. Three models for identifying and cultivating talent are described: (1) the Kranz Talent Identification Instrument, which creates a talent profile based on children's abilities in visual arts, creativity, academic talent, psychomotor talent, underachievement talent, performing arts, one-sided talent, leadership and organization, spatial and abstract thinking, and hidden talent; (2) Howard Gardner's theory of multiple intelligences, which posits seven types of human intelligence, including linguistic, logical-mathematical, musical, bodily-kinesthetic, spatial, interpersonal, and intrapersonal; and (3) Robert J. Sternberg's Triarchic Theory Model, which contends that human intelligence depends on a thoughtful relationship between a person's internal and external worlds and which assesses and teaches insight skills involving selective encoding, selective combination, and selective comparison. (Contains 20 references.) (JDD)

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Identifying Talents Among Multicultural Children

Bella Kranz

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BELLA KRANZ

Bella Kranz is best known for developing the Kranz Talent Identification Instrument (KTII), which identifies children on the basis of their gifts and talents and not their IQ.

Kranz has taught graduate and undergraduate education courses at Moorhead State University in Minnesota. She also has taught elementary gifted and talented students in California and has directed gifted and talented programs in several school systems throughout the United States. She was a visiting scholar at Teachers College, Columbia University in 1984; and in 1976-77 she received one of the first fellowships in gifted education from the Education Policy Fellowship, Office of the Gifted and Talented, U.S. Department of Education. Kranz also was a founder of the Northern Virginia Annual Convention for the Gifted.

Currently, Kranz lives in New York City, where she writes and conducts research. She also serves as a consultant and has conducted inservice programs for school districts throughout the country. Kranz recently completed a textbook for teachers of the gifted and talented, *Curriculum by Design: Challenging Gifted Learners*.

Series Editor, Donovan R. Walling

Identifying Talents Among Multicultural Children

by
Bella Kranz

Library of Congress Catalog Card Number 94-65066
ISBN 0-87367-364-6
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Bloomington, Indiana

This fastback is sponsored by the McIntosh Trail Georgia Chapter of Phi Delta Kappa, which made a generous contribution toward publication costs.

The chapter sponsors this fastback in honor of past presidents Paul Herbert, Liz Grove, Dan Colwell, Randy Hobbs, and Carol O'Neal, who provided a strong foundation for the young chapter.

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Introduction

For too long children's abilities have been identified by instruments that reflect a narrow definition of intelligence. Eminent adults whose abilities were unrecognized as children often relate the insurmountable problems they faced in school. Talented individuals – such as novelist Richard Wright or Gordon Parks, the film maker, photographer, and writer – were not identified as gifted in their school years. Edward Royball, a lawyer and former councilman in Los Angeles, was told by high school teachers not to go to college but to consider enrolling in a vocational school, which his teachers viewed as a more practical choice for a Mexican-American youth.

In the early 1960s P.C. Sexton warned that schools, in order to be effective, will have to consider the deprivations of being poor or persons of color and

> . . . will have to take into account that the boy [or girl] whose father works on an assembly line is less likely to have books in [the] home or to know anything about getting into college than is the boy [or girl] whose father is a college graduate (Sexton 1961).

The failure of schools in general, and gifted programs in particular, to address the question of recognizing potential talent across the spectrum of class and color is a troublesome challenge for gifted education.

This fastback will examine the limitations of traditional identification strategies as they are applied to children from minority and nontraditional cultural backgrounds and then will suggest more effective alternatives.

Problems with Traditional Identification Instruments

Conventional group tests, such as the Slossen, the Lorge-Thorndike, and the SRA, focus on academic abilities or achievement. These are not unimportant, but they do not provide a sufficient basis for addressing students' needs with regard to enrichment. Often these tests miss underachievers who are highly gifted, those with potential in the arts, or those who simply "march to a different drummer."

The type of test that is less likely to be used in most schools measures qualities of divergent thinking in order to anticipate more than one acceptable answer for a problem. For instance, in one test for assessing divergent thinking and creativity, a student is given a picture without a title. The student is expected to compose a story about the picture. Here are two sample responses, one from a student with above-average intelligence (high IQ) and one from a highly creative student.

High IQ Student: "Mr. Smith is on his way home from a successful business trip. He is very happy and he is thinking about his wonderful family and how glad he will be to see them again. He can picture it, about an hour from now, his plane landing at the airport and Mrs. Smith and their three children all there welcoming him home again."

Highly Creative Student: "This man is flying back from Reno where he has just won a divorce from his wife. He couldn't stand to live with her anymore, he told the judge, because she wore so much cold cream on her face at night that her head would skid across the pillow

and hit him in the head. He is now contemplating a new skid-proof face cream" (Getzels and Jackson 1962).

This type of instrument expands the educator's perspective of both intelligence and creativity, since describing intelligence by a single IQ score is an oversimplification of the complexity of human abilities (Block and Dworkin 1976; Gould 1981). Increasingly, critics of the single IQ score have agreed:

> The objections of the educated to IQ psychology arise from several sets of causes: first, misgivings about whether it is indeed possible to attach a single number valuation to an endowment as complex and various as intelligence; second, a biologically well-founded feeling of repugnance to the notion that differences of intelligence are to so high a degree under genetic control that all the apparatus of pedagogy and special training is necessarily relegated to an altogether minor role. (Medawar 1977)

Sternberg reminds us that the term "intelligence" is a loaded one and "what counts as intelligence differs significantly as a reflection of the context in which one finds oneself and the values that obtain there" (Sternberg and Okagaki 1992). Tests of intelligence have conventionally been mired in the concept of *how much* instead of *what kind and under what circumstances*.

Since the late 1970s a number of researchers have suggested that talents are multidimensional, found in all socioeconomic groups and among all ethnic and racial groups (Gardner 1983; Kranz 1978; Renzulli 1986; Sternberg 1985). Conventional methods for identifying talents or special abilities are inadequate for screening among blue-collar, poor, bilingual, culturally varied, and nonwhite groups. Even with so-called mainstream or middle-class groups, conventional screening is apt to select the academically oriented child or the one who is "well-behaved," while neglecting the creative, artistic, or innovative child. It is for these reasons that alternative methods for assessing the talents of children beyond the conventional IQ are crucial

for identifying gifted children outside the mainstream and developing programs that are consistent with their abilities.

The approaches to the problems of identifying and cultivating talent differ. We will examine three models, whose assumptions are compatible even though their approaches vary: Kranz Talent Identification Instrument (KTII), Howard Gardner's Multiple Intelligences, and Robert J. Sternberg's Triarchic Theory Model.

The Kranz Talent Identification Instrument (KTII)

The history of the Kranz Talent Identification Instrument begins with its pilot version, which the author developed in 1975-76 for one of the largest school systems in the country, the Fairfax County (Virginia) Public Schools. That pilot program enlarged the pool of eligible students for gifted programs by cutting across class, color, and ethnic lines. In addition to increasing the number of minority candidates for gifted classes, the procedure stimulated a new dynamism among the teaching staff about the nature of talent.

The Kranz Talent Identification Instrument is a screening device to help teachers assess the children in their classrooms on 10 talent dimensions:

Visual Arts	Performing Arts
Creativity	One-Sided Talent
Academic Talent	Leadership and Organization
Psychomotor Talent	Spatial and Abstract Thinking
Underachievement Talent	Hidden Talent

Clearly this is not the complete array of the talents that a child may exhibit, but it has proven to be sufficient for synthesizing a talent profile to aid in addressing the needs of learners heretofore unnoticed.

The talent dimensions were selected through lengthy observations in classrooms and in brainstorming sessions with experienced teachers of the gifted. Following are some of the questions that were explored in developing each talent dimension:

- What does a child with talent in a given dimension do that leads you to believe he or she is unusual in this respect?
- What kinds of things do you do in your curriculum to elicit responses that exhibit that talent?
- What kinds of non-school problem solving do you provide to evoke the talent?

These types of questions were posed for each talent dimension included in the KTII, and then suggested lessons were developed for teachers to use when assessing each talent.

A look at one of the talents from the teacher's manual will help readers to visualize the characteristics of the talents, the behaviors they include, and how teachers may practice with the suggested lessons to elicit the behaviors of children before rating them.

Performing Arts Talent, for example, is the ability to create or perform in areas of music, dance, or drama. The talent is indicated if a child composes music, changes lyrics to popular songs, or dramatizes situations rather than verbalizing them. Teachers may try one of the following from the suggested classroom lessons to assist in identifying that talent:

1. Ask the students to pretend to be a musical instrument and describe to a famous orchestra leader how they feel during a favorite symphony.
2. Give two groups of students boxes of ordinary items, such as a nylon stocking, a paper clip, a box top. Ask the students to create a skit using all the objects they have in the box.
3. Have children create a fable that uses an animal to represent someone the children know. The fable may be written, acted out, danced, or pantomimed.

Teachers also may devise their own strategies for tapping into each talent dimension. Those in the manual are only illustrative.

The KTII identifies students in grades K-6 for further evaluation for admission into gifted and talented programs. It is intended to be

administered by teachers in heterogeneous classrooms with children who come from various ethnic, socioeconomic, or racial groups.

Talent Profile

Since all children are assessed in each classroom, the KTII yields a talent profile for each child in the class, not just those students who may be placed in gifted programs. It inspires teachers to become more sensitive to the talents they discover in all their students. A particular strength of the KTII is its inclusion of such nonacademic talents as:

- Visual Arts: the ability to sculpt, photograph, or arrange media that suggests unusual talent.
- Creativity: an ability to use divergent and unconventional thinking, such as inventing new solutions for familiar problems or creating problems for which there are no apparent solutions.
- Leadership and Organization: an ability to relate to and motivate other people.
- Psychomotor Talent: often demonstrated as a physical ability beyond that expected in normal development.
- Spatial and Abstract Thinking: the ability to visualize and conceive ideas without the aid of concrete objects, or sensitivity to shapes, patterns, intervals of music, or numbers.

The KTII seeks "at-risk" students, those whose home life may not prepare them adequately for traditional school tasks. At-risk students may include children who are poor, who speak English as their second language, or who score low on standard achievement tests. Three of the KTII talents help to increase a teacher's insight into such children:

- One-Sided Talent identifies effective performance in a single academic or artistic area to the exclusion of others.
- Underachievement Talent identifies the student who can think on a high level but performs poorly in the normal classroom

setting, or the student who is self-taught in a particular skill not commonly taught in school.

- Hidden Talent identifies unusual ability to cope with the school environment despite ethnic, economic, or social problems. This may be reflected in unusual oral ability in poetry, choral speaking, rhetoric, or "rap." Or the student may collect items related to his or her cultural heritage, such as records, posters, statistics, or legends.

A Three-Stage Instrument

The KTII uses a three-stage identification procedure. Stage one is inservice, stage two is rating, and stage three is selection by a local screening committee. Each of these stages is important.

Research has demonstrated that unless they have training, teachers are poor identifiers of talented students (Gallagher 1985). Davis and Rimm (1985) noted that "a frequent outcome – if not the main purpose – of training is to raise teachers' awareness of the multidimensionality of their students." Therefore, the KTII emphasizes inservice as its first stage and includes a 35-minute videotape that illustrates how teachers should rate each child on the 10 talent dimensions.

The major contribution of the KTII has been to focus on the teacher's role in the rating procedure. Teachers are urged to rate children's behaviors not on whether the behaviors are "socially acceptable" but on whether they meet the criteria for a specified talent. Thus minority students, underachieving gifted, and students with varied language skills and cultural backgrounds are particularly well-served by the KTII. It helps teachers see past the norms of classroom behavior to the wide range of gifts and talents that culturally diverse students may possess.

The teacher rates each child in a given class in all 10 categories. When rating the children, the teacher must look at each child as if for the first time and must do so when rating each talent dimension.

This procedure helps avoid the error of assuming that if a child has relatively little talent in academics, he or she probably will be low in the one-sided talent dimension as well. The talents are not in any special order, so teachers may rate the dimensions in any sequence they wish.

The KTII is an instrument that "teaches to the test." That is, for each talent described in the manual, there is an opposite page with suggested lessons for teachers to try in order to see the talent behaviors more clearly. It is recommended that teachers use the suggested lessons before they rate a class of children.

The instrument encourages teachers to conduct a variety of classroom learning activities in order to elicit a wide range of talents. In this respect, the KTII provides a positive experience for all children during the screening process. Instead of the timed, austere, convergent atmosphere of conventional tests, there is a more relaxed and playful atmosphere.

Teachers are taught to rate each of the 10 talent dimensions in terms of frequency (how often the talent is observed), intensity (the drive or determination with which the student demonstrates the talent), and quality of the talent. A numerical rating is assigned to each dimension using a 7-point scale.

After teachers have rated all the children, they identify the four talent dimensions with the highest scores and, using a simplified scoring sheet, select the children who have scored at or above the criterion score. The scores of these students are forwarded to the local screening committee for more extensive evaluation.

Selection is the third stage of the process. A local screening committee receives the rating sheets from each class and any other data that a local school district agrees to use, such as a pupil self-inventory, a peer nomination, scores on reading and math, other relevant tests, or anecdotal information.

The local screening committee selects the students for formalized curriculum enrichment or a specialized gifted program. This proce-

dure relieves the teachers of the responsibility for placing a student in a gifted program, since placement is based on more data than teachers can provide. However, the process is initiated by teachers, who know their students best and will learn still more as they move through the training provided by the KTII.

But what happens to those who earn high ratings on one, two, or three talents and yet whose overall score is low? These children's profiles alert the classroom teacher that perhaps these students' learning needs are not being met by the regular curriculum.

Multiple Intelligences

Some researchers envision a far greater range of mental abilities in human cognition than the single factor of intelligence that was assumed by traditional intelligence tests. One such researcher is Howard Gardner, a psychologist at Harvard University and director of Harvard Project Zero. Gardner has challenged the complacency within psychology and education regarding the concept of unitary intelligence.

Dissatisfied with overly narrow definitions of intelligence, Gardner's work in neuropsychology, anthropology, and evolution led him to create a vision of more possibilities for human behavior. Gardner's theory of multiple intelligences posits seven types of human intelligence:

1. Linguistic: a sensitivity to the meaning and order of words.
2. Logical-Mathematical: the ability to handle chains of reasoning, to recognize patterns and order.
3. Musical: sensitivity to pitch, melody, rhythm, and tone.
4. Bodily-Kinesthetic: the ability to use the body skillfully and to handle objects with dexterity.
5. Spatial: the ability to manipulate the nature of space, such as through architecture, mime, or sculpture.
6. Interpersonal: the ability to understand people and relationships.
7. Intrapersonal: sensitivity to one's emotional life as a means to understand oneself and others.

No single intelligence can be divorced from its social, economic, and cultural contexts. In considering linguistic intelligence, for example, it is necessary to consider how the student may have been influenced by other languages spoken at home or learned as a result of travel.

Each of the seven intelligences is relatively independent in processing information, but there are many ways that people use these intelligences to solve everyday problems. According to Gardner, school learning tends to focus on a narrow range of intelligences. Sometimes these highly prized school intelligences are not very helpful to children or adults in their attempts to solve "real-world" problems.

While separate, the intelligences typically work in harmony; and that is why their autonomy is frequently invisible to the teacher. But viewed through the right lens, each emerges to the observer. Gardner believes that educators can identify a student's dominant intelligences at an early age and thus design an instructional program best suited to the student's talents (Gardner 1983).

Key School

While Gardner's theory of multiple intelligences is applied differently from school to school, one objective of Gardner's model is to focus on culturally mixed schools. An illustration is the Key School in Indianapolis (Winn 1990). In addition to a rigorous commitment to teaching the "three R's," this elementary school has developed a curriculum that includes multiple-intelligence strategies. For example, every child in the school has daily classes in music, art, and physical education, which provide four times the exposure to musical, bodily-kinesthetic, and spatial intelligence activities than is typically available to elementary school children.

In one room, visitors to Key School will find "little violinists eagerly honing their musical intelligence" to something like "Frosty the Snowman." In another classroom, children sit on the floor around a teacher who hands out small blocks, circles, and other math manipulatives

to help them find connections between addition and multiplication and, most important, to learn different ways of finding answers. Here, logical-mathematical intelligence is both diagnosed and nurtured.

Elsewhere a teacher demonstrates the difference between a large circle and a small triangle in Spanish, which the children study four times a week. Both linguistic and spatial intelligences are demonstrated, encouraged, and assessed. A huge rain forest with papier-mâché birds greets the visitor of still another classroom, again stimulating spatial intelligence.

Winn reminds us: "It is hard to remember that this is not a special school for gifted children, but one whose racially and ethnically diverse population is chosen entirely by lottery, with more than a third of the students qualifying for free or reduced-price school lunch" (1990). Not only did the reading and math scores of most of the children rise in this experiment with applying Gardner's multiple intelligences, but one of the school's success stories illustrates the effectiveness of multiple-intelligence theory better than the numerical data:

> Crystal . . . was a child who definitely could have been lost in the cracks. She wasn't good in spelling or math or any of the academic areas. But she just flowered, right before our eyes. And in the process of growing confident about her art and music and theater, the other areas got stronger. (Winn 1990)

Project Spectrum

Another project based primarily on multiple-intelligence theory involves preschool and first-grade students in the Somerville, Massachusetts, public schools. Project Spectrum is a collaboration between Gardner and David Feldman of Tufts University. Like the Indianapolis Key School, materials are available for children to play with all the time. The teacher-researchers observe, encourage, and assess the various intelligences that the children exhibit. The aim of the project is

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to find ways that academic achievement can be increased, self-esteem enhanced, and the students' attitudes toward school improved. As in the case of the Key School, the Somerville school was chosen because the student body was labeled "at risk" of school failure.

In Project Spectrum, spatial intelligence is assessed, for example, by using a science activity for preschoolers in which the child is presented with two food grinders to take apart and put back together. Successful completion of the activity depends on fine motor skills and visual-spatial abilities.

A treasure hunt is used to assess a child's ability to make logical inferences, an indicator of logical-mathematical intelligence. Objects are hidden on a game board under a flag of a particular color. The child begins the game by looking under one flag of each color. She is provided with a color-coded box to keep track of the uncovered treasures but is not instructed in how to use the box. The child is asked to predict what she will find under other flags. The way the color-coded box is used reflects how the child organizes information.

Art portfolios are used to assess spatial intelligence. They include paintings, collages, three-dimensional pieces, and a sample of the child's preferred medium.

Spatial, inter-, and intrapersonal intelligences are assessed and encouraged through creative movement, an activity in which children participate bi-weekly. In addition to assessment, Feldman focuses on the children's abilities in dance: sensitivity to rhythm, expressiveness, body control, generation of movement ideas, and responsiveness to music.

Arts Propel

Arts Propel is a final illustration of how far-reaching the effect of multiple-intelligences theory has been. In 1985 Gardner developed a collaborative with researchers from Project Zero, Educational Testing Service, and the Pittsburgh public schools' administrators, art

specialists, teachers, and students at the middle and high school level. This group's purpose was to examine artistic learning and productivity.

Arts Propel is an unusual application of Gardner's theory in that it focuses on what actually happens as the young artist makes, critiques, and revises a work of art, shaping his or her self-esteem in the process. Instead of addressing only spatial intelligence, there is an attempt to assess other intelligences that are used by people in the arts. Teachers and students learn to concentrate on what are called domain projects. These are sustained pieces of work in music, art, dance, or playwriting.

A domain such as dance, for example, offers a rich set of exercises involving production, perception, and reflection skills. These domain projects take many class sessions with a highly trained specialist. Students are encouraged to demonstrate their expertise in the domain on several levels: maker, critic, and evaluator. Following is an illustration:

> Over the course of the year students will stage several dance pieces (including costumes and lights), learn technique and performance skills, watch films of other choreographers' work, attend professional concerts, work with a guest artist, and step back repeatedly – to reflect on their work as it progresses. . . . Barbara [the teacher] assigns small projects for her students. For example, she may ask students to take an ordinary movement, like leaning, and make it extraordinary. In this way, students explore the craft of dance. They begin to define for themselves the tools of technique and their own movement "vocabulary" and repertoire. (Arts Propel 1989)

Authentic assessment is developed by the student artist, who systematically records the stages of developing the work of art. The goal is for students to raise their own questions and find their own solutions. Sometimes they get bogged down and frustrated, but they present a progress report at the end of every week.

Arts Propel teachers believe that much of what their students learn is invisible. That is, the process whereby they use their imagination,

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experiment, and take risks is not captured as easily as is the paint on paper or the dialogue of a play written in a notebook. A videotape recorder and detailed student and teacher journals are used to "hold still the past," to make a series of snapshots of the students' work in order to portray the process.

For the Arts Propel teachers, the point of arts education is neither knowledge nor technique, but use. Gardner has empowered teachers to find out if students can be perceivers, use what they know about drawing, making music, or dance, and see something new, something they were not told to notice (Arts Propel 1987).

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Triarchic Theory

Robert J. Sternberg, professor of psychology at Yale University, introduced an entirely different model for assessing intelligence than those used by his predecessors. Sternberg's position is that people are intelligent in different ways and that they tend to capitalize on the talents they have. The teacher's task is to help students acquire insight skills that they can use in other domains or content areas.

According to Sternberg, intelligence is not just what is measured on an IQ test, but rather how well a person processes information. For example, on conventional IQ tests students are urged to get "the answer" as quickly as possible; speed is an element that divides those who score high from those who score low. Yet the critical issue for Sternberg is how well the individual organizes time in order to accomplish a goal, not just how quickly the individual can do a particular task. In the real world, a person has to figure out when to read thoroughly, when to skim, and how to allocate time. Better thinkers, Sternberg finds, know when to work faster or slower.

Similarly, many problems can be solved in various ways. Students with spatial abilities may use different strategies from those with verbal talents. Insight into one's thinking and learning styles is required to do this effectively. Sternberg has developed a way to practice insight skills that has proved to be successful for improving the problem-solving ability of students from all social, economic, and ethnic backgrounds.

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Triarchic theory posits that human intelligence depends on a thoughtful relationship between a person's internal and external worlds. What goes on internally when trying to solve a problem? What strategies are used to either adapt to or shape the external world when confronted by a problem? How aware of the processes of thinking is the individual when solving a problem?

Sternberg demonstrates that individuals can make effective decisions about solutions to problems to the extent to which they are aware of their thinking. He refers to the components of this awareness as *metacomponents*, which enable students to be aware of how they encode, combine, or compare information in order to solve problems. According to Sternberg:

> The triarchic theory does not stand in opposition to most previous theories of intelligence. Rather, it integrates some of their most critical aspects, while dispensing with aspects that are idiosyncratic or simply wrong. . . . The theory seeks to represent the best of previous theories, while at the same time incorporating new elements, including new elements of integration among the aspects of intelligence. (1988*b*, p. 10)

The main purpose for assessing and teaching insight skills is to help the learner learn. Insight involves three separate, related psychological processes: selective encoding, selective combination, and selective comparison.

To *encode* means to sift out relevant information from a body of facts or data, much as a detective sorts out relevant clues at a cluttered crime scene. An example that Sternberg uses to illustrate this skill is the discovery of penicillin by Alexander Fleming. While trying to grow bacteria in a petri dish, Fleming's culture was spoiled by a mold that killed the bacteria. Others might have despaired that the experiment was ruined. Instead, Fleming's skill in selective encoding enabled him to realize that he had discovered a way to kill bacteria.

To *combine* means to know how to blend what seem like irrelevant pieces of a problem in order to discover its true basis. Sternberg cites the selective combination skill of some doctors. Patients may come to the doctor with a set of quite unrelated symptoms. It is the art of selective combination that enables the capable diagnostician to discover the complex of factors that indicate a particular disease, and so to devise an effective treatment.

To *compare* means to relate newly acquired information to known information. Thinking by analogy is a good example of this skill. For example, in trying to picture how genetic material is transmitted, Linus Pauling found himself cutting out paper dolls during a period when he was confined to bed. Suddenly, as he cut out a spiral, he made the connection to the possible structure of DNA, which Crick and Watson later developed more fully.

Students frequently find it hard to define problems. Real-life problems are often ill-structured, unlike those presented in school. They require that students figure out what information is needed and how to go about finding it. On the other hand, real-life problems usually are in a context, while school-type problems are decontextualized. Sternberg suggests that teachers ask students to solve problems that are more contextualized and, therefore, may permit more than one "right" answer. Following is an example of a problem that Sternberg uses with students to illustrate encoding, combining, and comparing.

Box Elder Problem

> Students see a picture of a house and a tree. The house is covered with little brown bugs, called box elder bugs. These bugs have flown from the tree to the house. When the weather turns colder, the box elder bugs try to enter the house, and some succeed. The problem is how to get rid of the bugs.

Several alternative solutions are proposed, but in each case the solution preferred by students suggests that the tree is the problem. They suggest removing the tree or treating it with insecticides. However,

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if the question is redefined so that the house is the problem, different solutions become possible. For example, students suggest painting the house a different color that will not attract the bugs. The box elder problem illustrates that the way a problem is defined affects its solution. This is typical of the kind of problems teachers will find in Sternberg's materials for improving insight skills.

Triarchic theory also emphasizes three styles of problem solving: executive, legislative, and judicial. How a student chooses to solve a problem depends on the choice of problem-solving style. Students, like teachers, are comfortable with a particular kind of learning style. If either the teacher or student has to switch styles, it is uncomfortable. Therefore, Sternberg recommends that teachers who want to teach insight skills learn to expect some discomfort, because their teaching style may be very different from what is best for the student (Sternberg and Martin 1988).

Students who use the executive style of problem solving like to follow rules and prefer a predefined problem. They reflect a style that says, "Tell me what I want to do." This type of student will do well with the didactic teacher or one who uses a fact-based questioning style.

Students who use the legislative style prefer tasks that require creativity, formulating a problem, and planning. Typically, they tend to create their own rules, seek unstructured problems, and enjoy situations in which they do things in their own way. They will probably do well in a classroom where the teacher uses a Socratic style of teaching.

Students who use a judicial style evaluate and analyze situations, much like a reviewer of books or plays. This type of student also fares well with a Socratic teaching style.

Of course, students do not use one style exclusively; but they do tend to specialize. Says Sternberg, "A key to successful problem solving is being able to cross over from use of one intellectual style to another."

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Another fundamental aspect of triarchic theory that seems to separate the very intelligent from the average is task analysis. Is the problem to be solved *novel* or *automatic*? Most of us learn to automate such behaviors as driving a car, reading, arranging household objects conveniently, and so on. It is the same for children. Sternberg comments, "Those gifted individuals who make the greatest long-range contributions to society are probably those whose gifts involve coping with novelty – specifically in the area of insight" (1988*a*, p. 74). Thus teachers should provide less time for the rote, conventional school tasks and more time for novel or creative endeavors.

Applying Triarchic Theory to Identification of Talent

Triarchic theory can be translated into a practical tool for identifying and assessing talent. The more that teachers use Sternberg's tests of metacomponents, the more they will be able to identify highly intelligent children from varied backgrounds. They also will be able to introduce and nurture these problem-solving skills among all children.

Triarchic assessment for K-12 students can be accomplished using the Sternberg Triarchic Abilities Test. A text, called *A Triarchic Program for Training Intellectual Skills*, also has been developed to be used by teachers to enhance their understanding of the various components of intelligence described in the triarchic theory.

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Letting the Genie Out

The premise of talent identification is that inside every child is a genie waiting to get out. With the appropriate theory and practice, each of the previously described models provides teachers with choices about how to release the genie of multiple intelligences. Once teachers start with the proposition that children know much more than that for which they are tested in school, then ways can be found both to identify cognitive strengths and to discover how they can be tapped.

The KTII "rubs the genie's lamp," so to speak, by sensitizing teachers to the multiple talents that can be elicited through other means than the conventional curriculum. The instrument serves to change teacher perceptions of students, a student's self-perception, and the curriculum. Multiple-intelligence theory and triarchic theory can help teachers recognize a repertoire of behaviors that exemplify different types of intelligence.

The KTII's 10 talent dimensions and Gardner's seven intelligences overlap. Although labeled slightly differently, both specify a range of talents that effectively alert teachers to their students' needs. The two approaches share the premise that intelligence is not one-dimensional, but rather multi-dimensional and complex. And each model tries to identify talents that address both the cognitive and the affective domains. Both models suggest that in order for talents to be revealed, something in the environment, specifically the school environment, needs to be modified.

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Of the three models discussed, the triarchic theory provides for talent identification in a way that is most formal and systematic. Despite his serious differences with the theoretical base of conventional IQ testing, Sternberg has produced a test of abilities that may be administered to students in the conventional style, that is, a "pencil-and-paper" test. The Sternberg Triarchic Abilities Test not only measures analytical ability, but it also addresses synthetic-creative ability (creativity) and practical-contextual ability (real-life problem solving).

While analytical ability is seen in students who score well on IQ tests and do well on school tasks, creative abilities are associated with those who show insight into solving novel problems and who may be less "school smart." Those who are exceptional in coping with the everyday problems of life frequently are labeled "street smart" (Sternberg and Davidson 1984). Thus these types of assessment are more likely to identify talented students outside the mainstream of school success. Quite often, these are students from disadvantaged backgrounds.

Changing the way we assess the talents of children will make a profound difference in education. Teachers will find that applying any one of the models described in this fastback may well produce a chain reaction that creates more appropriate educational opportunities not just for multicultural children but for all children.

Teachers, armed with a vision and sense of what is possible, can change the circumstances of their own classrooms and even those of their colleagues. There is no best way of taking an ordinary situation and making it extraordinary for children in school. But looking beyond the obvious for hidden talents is a first step in improving education for multicultural children. Choosing one of the models for assessing multidimensional talents will provide teachers with the spark to ignite the hope of learners languishing in despair and failure in too many classrooms.

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